TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2019-01-23-81** **Date: 14-12-18**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-12-18
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	12-12-18
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	318	318	2.9	97.1	95-100
22.4	2259	2577	23.4	76.6	60-80
11.2	2179	4756	43.2	56.8	40-60
4.75	2251	7007	63.7	36.3	25-40
2.36	1621	8628	78.4	21.6	15-30
0.6	625	9253	84.1	15.9	8-22
0.075	1338	10591	96.3	3.7	0-5

Note:-

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2019-01-23-81** **Date: 14-12-18**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-12-18
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	12-12-18

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.2
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.2
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.7	

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2019-01-23-81** **Date: 14-12-18**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-12-18
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	12-12-18

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.6%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.4%	
Combined Flakiness and Elongation Index for WMM	25.0%	

Note:-
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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2019-01-23-81** **Date: 28-12-18**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	26-12-18
Type of Mix	:	BC-Plant (Bituminous Concrete)
Date of test	:	26-12-18
Oven Dry Weight	:	5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	89	89	1.8	98.2	90-100
9.5	702	791	15.8	84.2	70-88
4.75	895	1686	33.7	66.3	53-71
2.36	587	2273	45.5	54.5	42-58
1.18	492	2765	55.3	44.7	34-48
0.6	503	3268	65.4	34.6	26-38
0.3	528	3796	75.9	24.1	18-28
0.15	458	4254	85.1	14.9	12-20
0.075	350	4604	92.1	7.9	4-10
PAN	396	5000	100	0.0	0

Note:-
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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

CIVIL PRO Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID : **CP-RW-2019-01-23-81** **Date: 29-12-18**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore

Address : Vidyaranyapura Sub Division, BBMP, Bangalore

Project Name : Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.

Agency : Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.

Customer Reference : BBMP/EE/BTP/WO/89/2018-19

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-12-18

Type of Mix : BC(Bitumenous Concrete)

Date of test : 26-12-18

Type of Binder : 60/70

% of Binder Used : 5.0%

Weight of Aggregate : 200.0 gm

Weight of Binder : 10.0 gm

Temperature of water bath : 40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

Note:-
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Quality Manager

****End of Report****

PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID : **CP-RW-2019-01-23-81** **Date: 29-12-18**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore

Address : Vidyaranyapura Sub Division, BBMP, Bangalore

Project Name : Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.

Agency : Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.

Customer Reference : BBMP/EE/BTP/WO/89/2018-19

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-12-18

Type of Mix : BC (Bituminous Concrete)

Date of test : 26-12-18

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

Note:-

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All information Furnished by Customer/ Representative
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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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Quallity Manager

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2019-01-23-81** **Date: 29-12-18**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	26-12-18
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	26-12-18

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : **CP-RW-2019-01-23-81** **Date: 05-01-19**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore

Address : Vidyaranyapura Sub Division, BBMP, Bangalore

Project Name : Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.

Agency : Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.

Customer Reference : BBMP/EE/BTP/WO/89/2018-19

Source of Sample : Sample supplied by Agency

Date of Receipt : 03-01-19

Type of Mix : BC (Bituminous Concrete)

Date of test : 03-01-19

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	473	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.40	5.60
4	Average percentage	%	5.5	

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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Lab ID : **CP-RW-2019-01-23-81** **Date: 05-01-19**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.6	62.4	53-71
2.36	88	266	56.2	43.8	42-58
1.18	29	295	62.4	37.6	34-48
0.6	11	306	64.7	35.3	26-38
0.3	46	352	74.4	25.6	18-28
0.15	45	397	83.9	16.1	12-20
0.075	55	452	95.6	4.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.7	62.3	53-71
2.36	88	266	56.4	43.6	42-58
1.18	29	295	62.5	37.5	34-48
0.6	11	306	64.8	35.2	26-38
0.3	46	352	74.6	25.4	18-28
0.15	45	397	84.1	15.9	12-20
0.075	55	452	95.8	4.2	4-10

Note:-

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Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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Quality Manager

End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Date: 11-01-19

Lab ID	:	**CP-RW-2019-01-23-81**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Sample supplied by Agency
Date of Receipt	:	09-01-19
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	09-01-19

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	471	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.80	5.60
4	Average percentage	%	5.7	

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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Quality Manager

Lab ID : **CP-RW-2019-01-23-81** **Date: 11-01-19**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 471

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.8	62.2	53-71
2.36	88	266	56.5	43.5	42-58
1.18	29	295	62.6	37.4	34-48
0.6	11	306	65.0	35.0	26-38
0.3	46	352	74.7	25.3	18-28
0.15	45	397	84.3	15.7	12-20
0.075	55	452	96.0	4.0	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.7	62.3	53-71
2.36	88	266	56.4	43.6	42-58
1.18	29	295	62.5	37.5	34-48
0.6	11	306	64.8	35.2	26-38
0.3	46	352	74.6	25.4	18-28
0.15	45	397	84.1	15.9	12-20
0.075	55	452	95.8	4.2	4-10

Note:-

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

CIVIL Pro
Sig.....
Date.....
BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : **CP-RW-2019-01-23-81** **Date: 16-01-19**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore

Address : Vidyaranyapura Sub Division, BBMP, Bangalore

Project Name : Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.

Agency : Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.

Customer Reference : BBMP/EE/BTP/WO/89/2018-19

Source of Sample : Sample supplied by Agency

Date of Receipt : 14-01-19

Type of Mix : BC (Bituminous Concrete)

Date of test : 14-01-19

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	473	474
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.40	5.20
4	Average percentage	%	5.3	

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

CIVIL PRO Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Lab ID : **CP-RW-2019-01-23-81** **Date: 16-01-19**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.6	62.4	53-71
2.36	88	266	56.2	43.8	42-58
1.18	29	295	62.4	37.6	34-48
0.6	11	306	64.7	35.3	26-38
0.3	46	352	74.4	25.6	18-28
0.15	45	397	83.9	16.1	12-20
0.075	55	452	95.6	4.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	13.9	86.1	70-88
4.75	112	178	37.6	62.4	53-71
2.36	88	266	56.1	43.9	42-58
1.18	29	295	62.2	37.8	34-48
0.6	11	306	64.6	35.4	26-38
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0.15	45	397	83.8	16.2	12-20
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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2019-01-23-81** **Date: 21-12-18**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore
Project Name	:	Package-2 (includes 7 works) 1)Improvements to Roads and Drains at 4th and 5th Cross Jai Hanuman Layout in Ward No.09, V idyaranyapura. 2)Improvements to Roads and Drains at 6th Cross Between 2nd and 3rd Block HMT Layout in Ward No.09, Vidyranyapura.3)Improvements to Footpath at 9th Main 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.4)Improvements to Ganesha Temple Road, Munishanthappa Layout in Ward No.09, Vidyaranyapura.5)Improvements to Roads and Drains 5th Cross, 2nd Block HMT Layout in Ward No.09, Vidyaranyapura.6)Iprovements to Roads and Drains from Hopcoms to Somanna Garden Road of HMT Layout in Ward No.09, Vidyaranyapura.7)Improvements to Roads and Drains at Sapthagiri Layout Cross Roads and Somanna Garden 3rd Cross in Ward No.09, Vidyaranyapura.
Agency	:	Sri.Alankar K.B, # 12, MSV Network Road, Near Shobha Apartment, Amruthahalli, Sahakaranagara(P), Bangalore-560092.
Customer's Reference	:	BBMP/EE/BTP/WO/89/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-12-18
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-1220(1978) (Reaffirmed-2004)
Date of test	:	20-12-18

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	**64**	60 to 70
2	Softening Point, °C	**51.2**	Min. 40°C
3	Ductility, cm	**98**	Min. 75cm
4	Flash point, °C	**245**	Min. 220°C
	Fire point, °C	**272**	

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CIVIL Pro BANGALORE Sig..... Date.....

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****